

DRAWING AMENDMENTS

Replacement drawings for Figures 2 – 9 and 14 – 21 are attached. A Petition to Accept Color Photographs under 37 C.F.R. 1.84(b)(2) is being filed simultaneously with this Amendment.

REMARKS

The following claims were pending in the application: 1 – 19 and 94 - 111

The following claims have been amended: 1, 2, 4, 5, 17, 94, 96, 97, 107 and 110

The following claims have been cancelled without prejudice: 20 - 93

The following claims have been added:

As a result of the foregoing Amendment, the following claims remain pending in the application: 1 – 19 and 94 – 111.

The Objection to the Drawings

The Examiner has objected to the drawings.

Applicant has provided replacement sheets for Figures 2 – 9 and 14 – 21, in order to provide clearer drawings in compliance with the rules.

The Rejection under 35 U.S.C 101

The Examiner has rejected claims 1 – 12, 15 – 17, 19, 94, 96 – 107 and 109 – 110 as allegedly claiming subject matter that is non-statutory under 35 U.S.C 101.

The Examiner has reasoned that the claims do not recite statutory subject matter. The Examiner has stated:

Claims 1-12, 15-17, 19, 94, 96-107, 109-110 are drawn to a process. A statutory process must include a step of a physical transformation, or produce a useful, concrete, and tangible result (*State Street Bank & Trust Co. v. Signature Financial Group Inc.* CAFC 47 USPQ2d 1596 (1998), *AT&T Corp. v. Excel Communications Inc.* CAFC 50 USPQ2d 1447 (1999)). The instant claims do not result in a physical transformation, thus the Examiner must determine if the instant claims include a useful, concrete, and tangible result.

As noted in *State Street Bank & Trust Co. v. Signature Financial Group Inc.* CAFC 47 USPQ2d 1596 (1998) below, the statutory category of the claimed subject matter is not relevant to a determination of whether the claimed subject matter produces a useful, concrete, and tangible result:

The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter-- but rather on the essential characteristics of the subject matter, in particular, its practical utility. Section 101 specifies that statutory subject matter must also satisfy the other "conditions and requirements" of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice. See *In re Warmerdam* 33 F.3d 1354, 1359, 31 USPQ2d 1754, 1757-58 (Fed. Cir. 1994). For purpose of our analysis, as noted above, claim 1 is directed to a machine programmed with the Hub and Spoke software and admittedly produces a "useful, concrete, and tangible result." *Alappat* 33 F.3d at 1544, 31 USPQ2d at 1557. This renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.

In determining if the claimed subject matter produces a useful, concrete, and tangible result, the Examiner must determine each standard individually. For a claim to be "useful," the claim must produce a result that is specific, and substantial. For a claim to be "concrete," the process must have a result that is reproducible. For a claim to be "tangible," the process must produce a real world result. Furthermore, the claim must be limited only to statutory embodiments.

Claims 1-12, 15-17, 19, 94, 96-107, 109-110 do not produce a tangible result. A tangible result requires that the claim must set forth a practical application to produce a real-world result. This rejection could be overcome by amendment of the claims to recite that a result of the method is outputted to a display or a memory or another computer on a network, or to a user, or by including a physical transformation.

Applicant respectfully submits that under the legal test in the cases cited by the Examiner, the present invention clearly represents statutory subject matter.

The present invention of claims 1-12, 15-17, 19, 94 and 96-107 all relate to a method of determining the presence of E. Coli. in water from light reflected therefrom. Claims 109-110 add a data transmission step. The Examiner apparently has interpreted the legal test of statutory subject matter to require some physical event as the Examiner has taken the position that “[a] tangible result requires that the claim must set forth a practical application to produce a real-world result. This rejection could be overcome by amendment of the claims to recite that a result of the method is outputted to a display or a memory or another computer on a network, or to a user, or by including a physical transformation.”

Applicant respectfully submits that the invention as claimed does lead to a tangible result as it allows the user of the method to detect the presence of coliform bacteria in water by remote means. Its beneficial result is apparent from the specification. It involves obtaining *a measurement of reflected light* from water in the form of a measurement of the respective amount of light in at least three wavelength ranges and *making a determination* based upon those amounts. The invention is thus not merely an algorithm or series of mental steps.

As in *State Street Bank*, the present invention thus gives rise to a tangible, useful result, even though the useful result is expressed in the form of a determination based

upon a calculation (just as the “numbers, such as price, profit, percentage, cost, or loss” obtained in *State Street Bank*), or arrived at through application of a formula.

Applicant respectfully submits that claims of the same form as the rejected claims have already been issued by the U.S. Patent & Trademark Office. The Examiner’s attention is respectfully directed to U.S. Patent No. 7,132,254 awarded to Applicant which contains claims styled similarly as those at issue here. These claims were issued without requiring that a result of the method is outputted to a display or a memory or another computer on a network, or to a user, or by including a physical transformation.

In this respect, the present claims do require the physical step of taking a measurement of a physical phenomenon followed by a determination of an amount, thus arriving at a practical application to produce a real-world result.

Other patent claims involving a measurement followed by relating the results of that measurement to a determination include, for instance claim 20 of U.S. Patent No. 6,544,729, claim 1 of U.S. Patent No. 7,262,864 and claim 5 of U.S. Patent No. 7,280,231, all of which involve physical measurements followed by a determination, without requiring an output to a display or a memory or another computer on a network, or to a user, or a physical transformation.

Accordingly, the present claims are directed to a method involving a measurement step and a determination step, and thus properly define a process that constitutes statutory subject matter under 35 U.S.C. 101 and the decisional precedent interpreting it.

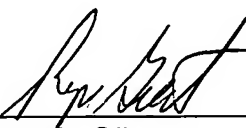
CONCLUSION

In view of the foregoing amendment and accompanying remarks, Applicant respectfully submits that the present application is properly in condition for allowance and may be passed to issuance upon payment of the appropriate fees.

Telephone inquiry to the undersigned in order to clarify or otherwise expedite prosecution of the subject application is respectfully encouraged.

Respectfully submitted,

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